REMARKS

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 1, 2, 4-7, 9, 10 12-15 and 18-20 are pending. Claims 8, 17 and 21-27 are canceled and claims 1 and 14 are amended.

The Examiner is thanked for indicating that claims 23 and 26 are allowed. The Examiner is also thanked for indicating that claims 8 and 17 would be allowable if rewritten in independent format including all of the limitations of the base claim and any intervening claims, in order to overcome the objection of their being dependent upon a rejected base claim.

The Examiner is thanked for the courtesies extended to Applicant's representative during a March 11, 2003, telephone interview in which the outstanding Office Action was discussed. Applicant's separate record of the substance of the interview is contained in the following remarks.

Claims 1 and 14 have been amended to incorporate the allowable subject matter of claims 8 and 17 respectively. Amended claims 1 and 14 are identical to claims 23 and 26, and thus, claims 23 and 26 have been cancelled herein.

Claims 1-2, 4-7, 9, 10, 13-15, 18, 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,031,919 to Funahashi *et al.* in view of U.S. Patent No. 5,327,504 to Hobelsberger and further in view of U.S. Patent No. 5,533,134 to Tokura. This rejection has been obviated by the amendments to the claims.

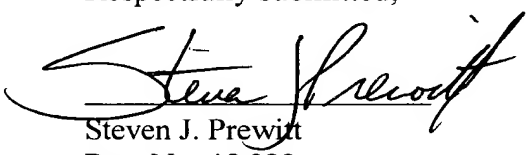
Claims 12 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,031,919 to Funahashi *et al.* in view of U.S. Patent No. 5,327,504 to Hobelsberger, further in view of U.S. Patent No. 5,533,134 to Tokura

and further in view of U.S. Patent No. 5,693,917 to Bertagni *et al.* This rejection has been obviated by the amendments to the claims.

Claims 22, 24, 25 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,031,919 to Funahashi *et al.* in view of U.S. Patent No. 5,327,504 to Hobelsberger. This rejection has been obviated by the amendments to the claims.

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Steven J. Prewitt at 703-591-2664. In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,



Steven J. Prewitt
Reg. No. 45,023

Jagtiani + Guttag
Democracy Square Business Center
10379-B Democracy Lane
Fairfax, Virginia 22030
703-591-2664

March 10, 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
MULLINS, Joe H.	)	**Examiner: GRIER, Laura A.**
	)	
Serial Number: 09/389,085	)	**Art Unit: 2644**
	)	
Filed: September 2, 1999	)	
	)	
For: LOW FREQUENCY FEEDBACK CONTROLLED AUDIO SYSTEM	)	**Docket No.: UNME-0019-1**
	)	

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Sir:

Below are the amendments in the accompanying Amendment for the above-identified application shown in redlined format:

IN THE CLAIMS

Please cancel claims 8, 17 and 21-27 without prejudice or disclaimer.

Please amend the claims, without prejudice or disclaimer, as indicated below:

1. (~~Twice~~ Thrice Amended) An audio system, comprising:

a cabinet having an opening in a first wall thereof;

a first speaker for emitting audio output, said first speaker being mounted inversely at said opening of said cabinet;

a passive radiator for emitting audio output, said passive radiator mounted in said cabinet opposite said first speaker; and

a sensor for sensing pressure caused by the audio output from said first speaker, said sensor being mounted in said cabinet by a sensor mounting structure

joined to said cabinet, said sensor mounted in such a manner as to receive a signal from both the speaker and the passive radiator, wherein said sensor is a speaker and wherein said sensor has a signal-to-noise ratio of at least 100 dB.

2. The audio system of claim 1, wherein said audio system comprises a low frequency audio system.

4. The audio system of claim 1, wherein said sensor mounting structure comprises a damped elastic mounting structure.

5. The audio system of claim 1, wherein said sensor mounting structure comprises an enclosure mounted on said first wall and including said opening in said first wall.

6. The audio system of claim 1, further comprising a means for adjusting the audio output of said first speaker based on said pressure sensed by said sensor.

7. The audio system of claim 1, wherein said first speaker has a speaker maximum width and said sensor has a sensor maximum width, and said sensor maximum width is smaller than said speaker maximum width.

9. The audio system of claim 1, wherein said audio system has a feedback factor of 30 to 50 dB when said first speaker operates at a frequency of about 15 to 300 Hz.

10. The audio system of claim 1, further comprising acoustic absorbing material contained in said cabinet.

12. The audio system of claim 1, wherein said first speaker comprises an electrodynamic planar speaker.

13. The audio system of claim 1, wherein said first speaker comprises an

electrostatic planar speaker.

14. (~~Twice~~ Thrice Amended) A method for improving acoustical accuracy in an audio system comprising the steps of:

mounting a first speaker inversely in an opening of a wall of a cabinet;

mounting a passive radiator in said cabinet opposite said first speaker;

sensing pressure from audio output from the first speaker and the passive radiator; and

adjusting the audio output from the first speaker based on the pressure sensed in said sensing step, wherein said sensing step is performed by a sensor comprising a speaker and wherein said sensor has a signal-to-noise ratio of at least 100 dB.

15. The method of claim 14, wherein the audio system comprises a low frequency audio system.

18. The method of claim 14, wherein said method produces an audio system feedback factor of 30 to 50 dB when the first speaker operates at a frequency of about 15 to 300 Hz.

19. The method of claim 14, wherein said first speaker comprises an electrodynamic planar speaker.

20. The method of claim 14, wherein said first speaker comprises an electrostatic planar speaker.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
MULLINS, Joe H.	)	**Examiner: GRIER, Laura A.**
	)	
Serial Number: 09/389,085	)	**Art Unit: 2644**
	)	
Filed: September 2, 1999	)	
	)	
For: LOW FREQUENCY FEEDBACK CONTROLLED AUDIO SYSTEM	)	**Docket No.: UNME-0019-1**

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

LETTER

Sir:

The below-identified communication(s) is (are) submitted in the above-captioned application or proceeding:

☒ Amendment

☒ The Commissioner is hereby authorized to charge payment of any fees associated with this communication, including fees under 37 C.F.R. §§ 1.16 and 1.17 or credit any overpayment to **Deposit Account Number 10-0233-UNME-0019-1.**

Respectfully submitted,

Steven J. Prewitt
Registration Number 45,023

JAGTIANI + GUTTAG
Democracy Square Business Center
10379-B Democracy Lane
Fairfax, Virginia 22030

(703) 591-2664

March 10, 2003